

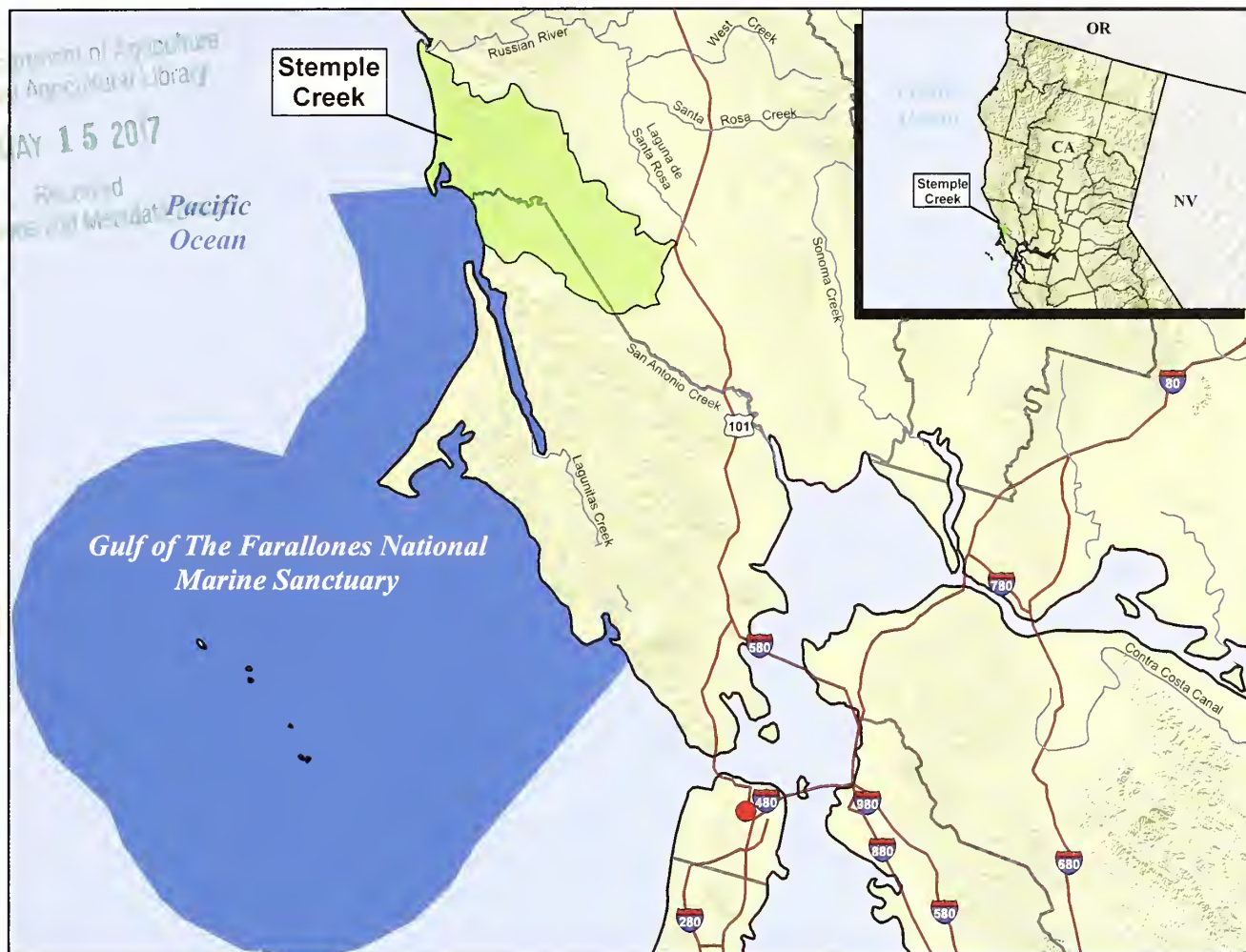
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Conservation Effects Assessment Project (CEAP) *Watershed Fact Sheet*

Stemple Creek Watershed, California: 2004-2006

An NRCS* Special Emphasis Watershed, one of 24 CEAP watershed projects.



CEAP Assessment

Evaluate water quality and wildlife benefits of dairy waste management systems, riparian restoration, and soil erosion control.

- California has designated Stemple Creek as an impaired water body for: dissolved oxygen, temperature, pH, ammonia, and sediment.
- Endangered species: California freshwater shrimp

Watershed Description

- Sub-watershed, Bodega Bay (Marin and Sonoma Counties).
- Included in the Gulf of the Farallones National Marine Sanctuary
- 32,980 acres
- 90% grazingland, 20 medium-sized dairies, limited cropland

Issues: Loss of riparian vegetation on 70% of waterways, nutrients in runoff from dairy manure, sediment loads to the estuary, Estero de San Antonio.

*Natural Resources Conservation Service



Upper Reaches of Stemple Creek, stream gradient 0.034; result of fault truncated watershed. Pre ditch condition - marsh.



In the Middle Reaches, Main Stem of Stemple Creek a back hoe pit was dug to characterize the floodplain soil and attempt to find the break between modern sediments and geologic sediments.

Approach

Water Sampling: Dissolved oxygen, temperature, pH, ammonia, and sediment

Watershed Models: AnnAGNPS (Annualized Agricultural Non-Point Source), REMM (Riparian Ecosystem Management Model) and CONCEPTS (CONservational Channel Evolution and Pollutant Transport System).

Photo Monitoring: Use periodic photography
1) to qualitatively measure habitat improvement and
2) for rapid stream assessments.

Communicating Results

1) Three annual progress reports; 2) technical papers: evaluation of existing data, channel erosion as a component of a watershed sediment budget, nutrient sources, and the effects of best management practices on sediment and nutrients; and 3) final project report.

Collaborators

- Marin and Sonoma County Resource Conservation Districts
- North Coast Regional Water Quality Control Board
- USDA Agricultural Research Service
- University of California Davis
- California Department of Fish and Game
- U.S. Environmental Protection Agency
- Sonoma County Farm Bureau

Contacts

Luana Kiger, State CEAP Coordinator
(luana.kiger@ca.usda.gov)

NRCS State Conservationist

Ed Burton

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